UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 19 2018

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Gary Williams
Plant Manager
Solutia, Inc.
5100 West Jefferson Avenue
Trenton, Michigan 48183

Re: Notice and Finding of Violation
Solutia, Inc.
Trenton, Michigan

Dear Mr. Williams:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to Solutia Inc. (you) under Section 113(a)(1) and (3) of the Clean Air Act, 42 U.S.C. § 7413(a)(1) and (3).

We find that you are violating the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources at 40 C.F.R. Part 63, Subpart VVVVVV, the Michigan State Implementation Plan and Title V of the Clean Air Act and its implementing regulations at your Trenton, Michigan facility.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the NOV/FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contacts in this matter are Albana Bega and Jillian Rountree. You may call them at (312) 353-4789 and (312) 353-3849 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

Edward Nam
Director
Air and Radiation Division

cc: Jenine Camilleri, Enforcement Unit Supervisor, Air Quality Division
Wilhemina McLemore, Environmental Manager, Detroit District
Brett A. Sago, Director, HSE Legal Service, Eastman Chemical
Steven C. Kohl, Warner Norcross&Judd LLP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
Solutia, Inc.	)	**NOTICE AND FINDING OF**
Trenton, Michigan	)	**VIOLATION**
	)	
Proceedings Pursuant to	)	**EPA-5-19-MI-01**
Section 113(a)(1) and (a)(3) of the	)	
Clean Air Act, 42 U.S.C.	)	
§§ 7413(a)(1) and (a)(3)	)	

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice and Finding of Violation (NOV/FOV) under Sections 113(a)(1) and (a)(3) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1) and (a)(3). EPA finds that Solutia Inc. (Solutia) is violating or has violated the Michigan State Implementation Plan (SIP), provisions of its Title V permit, and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources at 40 C.F.R. Part 63, Subpart VVVVVV, as follows:

Statutory and Regulatory Background

Michigan SIP

1. Section 110 of CAA, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of primary and secondary National Ambient Air Quality Standards in the state. Upon approval by EPA, the plan becomes part of the federally enforceable SIP for the state.

2. Pursuant to 40 C.F.R. § 52.23, failure to comply with any approved regulatory provision of a SIP, or with any permit condition or permit denial issued pursuant to approved or promulgated regulations for the review of new or modified stationary or indirect sources, or with any permit limitation or condition contained within an operating permit issued under an EPA-approved program that is incorporated in the SIP, shall render the person so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the CAA.

3. On June 1, 2006, EPA approved R 336.1628 (2002) (Rule 628) as part of the federally approved Michigan SIP. 71 Fed. Reg. 31093.

4. The Michigan SIP, at Rule 628.(1) states that no person shall cause or allow the emission of a volatile organic compound (VOC) from a component of existing manufacturing process equipment at a synthetic organic chemical and polymer manufacturing plant located in Wayne County, unless all of the provisions of subrules (2) to (16) of Rule 628 are met. The provisions of 40 C.F.R. Part 60, Standards of Performance for Equipment Leaks of VOC in the

Synthetic Organic Chemicals Manufacturing Industry, Subpart VV, §§ 60.480 to 60.489 (2000), are adopted by reference in Rule 628.

5. Rule 628.(2) states that no person shall operate existing manufacturing process equipment at a synthetic organic chemical and polymer manufacturing plant unless a monitoring program is implemented. The monitoring program shall provide for, among other things, a quarterly inspection of all components in light liquid or gaseous VOC service that are not designated as difficult-to-monitor components, a weekly visual inspection of all seals of pumps in light liquid service, and an inspection, as soon as is practical, but not later than 5 calendar days, after the repair of a component that was found leaking.

6. Rule 628.(3) states that except for the visual inspections required by the provisions in Rule 628.(2)(c), all inspections shall be performed using equipment and procedures as specified in federal reference test method 21 as described and adopted by reference in R 336.2004. A component is leaking when a concentration of more than 10,000 parts per million (ppm), by volume, as methane or hexane, is measured by method 21.

7. Rule 628.(9) requires that a component that is found to be leaking pursuant to the monitoring program provisions in Rule 628.(2) or for another reason shall be repaired. Except as provided in Rule 628.(11), the leak shall be repaired as soon as possible, but not more than 15 days after the leak is detected.

8. Rule 628.(11)(a) states that if a leak cannot be repaired within 15 calendar days because the leaking component cannot be repaired unless the synthetic organic chemical and polymer manufacturing process unit is shut down, then the person who operates the synthetic organic chemical and polymer manufacturing plant shall maintain a log of the non-repair and the leak shall be repaired at the next unit turnaround.

9. Rule 628.(11)(b) states that if a leak cannot be repaired within 15 calendar days due to circumstances beyond the control of the person who operates the synthetic organic chemical and polymer manufacturing plant, then the person shall notify the department of the circumstances causing the delay in repair before the end of the fifteenth day and shall maintain a log of the nonrepair. The leak shall be repaired in an expeditious manner, which shall be within 6 months of the date the leak was detected.

10. Rule 628.(11)(c) states that the log specified in Rule 628.(11)(a) and (b) shall list, among other things, the reason why the leak cannot be repaired within 15 days.

11. Rule 628.(13) requires owners or operators of the synthetic organic chemical and polymer manufacturing plant to submit to Michigan Department of Environmental Quality (MDEQ), not later than 25 calendar days after the end of the previous quarter, a report that contains all of the following information for that quarter: (a) the total number of components tested, by type, (b) the total number of components which are found leaking and which are repaired, by type; (c) the total number of components, by synthetic organic chemical and polymer manufacturing process unit and type, which are found to be leaking and which are not repaired within the required time period and the reason for non-repair; (d) the type or types of

monitoring equipment utilized during the quarter; and (e) the total number of unsafe-to-monitor components that are logged as required by the provisions of Rule 628.(12).

Title V Requirements

12. Title V of the CAA, 42 U.S.C. §§ 7661-7661f, and its implementing regulations at 40 C.F.R. Part 70, establish an operating permit program for certain sources, including major sources, and other sources made subject under Section 502(a) of the CAA, 42 U.S.C. § 7661a(a).

13. For the purposes of Title V, Section 501(2)(B) of the CAA, 42 U.S.C. § 7661(2)(B), and 40 C.F.R. § 70.2 define "major source" as, among other things, any stationary source that directly emits or has the potential to emit 100 tons per year (tpy) or more of any air pollutant.

14. Pursuant to Section 502(b) of the CAA, 42 U.S.C. § 7661a(b), EPA promulgated regulations establishing the minimum elements of a Title V permit program to be administered by any air pollution control agency. 57 Fed. Reg. 32295 (July 21, 1992). These regulations are codified at 40 C.F.R. Part 70.

15. On January 10, 1997, EPA granted interim approval of Michigan's Title V permit program. 62 Fed. Reg. 1387 (effective February 10, 1997). On December 4, 2001, EPA fully approved the Michigan Title V permit program, 66 Fed. Reg. 62949 (effective November 30, 2001), and, on November 10, 2003, EPA approved revisions to the Michigan Title V permit program, 68 Fed. Reg. 63735 (effective December 10, 2003), after a December 11, 2001 notice of deficiency, 66 Fed. Reg. 64038.

16. Under Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), and EPA's implementing regulations at 40 C.F.R. § 70.7(b), it is unlawful for any person to violate any requirement or conditions of a permit issued under Title V.

17. MDEQ issued Renewable Operating Permit No. MI-ROP-B2155-2009a (Title V Permit) to Solutia, effective August 12, 2009. The Renewable Operating Permit (ROP) was renewed on August 12, 2009 and last revised on December 18, 2012.

18. Condition I.1.of the Source-Wide Conditions of Solutia's Title V Permit limit "each individual hazardous air pollutant (HAP)" to less than 9.0 tpy, based on a 12-month rolling average.

19. Condition VI.3. of the Source-Wide Conditions of Solutia's Title V Permit requires that Solutia implement a leak detection and repair (LDAR) monitoring program for monitoring fugitive HAP emissions on the in-HAP service equipment and monitor in-HAP service equipment at least semi-annually.

20. Condition VI.4. of the Source-Wide Conditions of Solutia's Title V Permit requires that the Solutia keep, in a satisfactory manner, records of the fugitive HAPs LDAR monitoring program.

21. FGPOLYKETTLES Flexible Group Condition III.1. of Solutia's Title V Permit prohibits Solutia from operating any of the polykettles unless the malfunction abatement plan (MAP) for the resins operations at the facility submitted on April 17, 2008, or any subsequent approved amendment, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs.

22. FGPOLYKETTLES Flexible Group Condition VI.2. of Solutia's Title V Permit requires Solutia to monitor, in a satisfactory manner, the liquid flow rate for each absorber/scrubber on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes.

23. FGRULE631COMB Flexible Group Condition I.1. of Solutia's Title V Permit prohibits Solutia from emitting greater than 221 pounds (lbs) of VOC per day from, among other equipment, Solutia's three polykettles.

24. FGRESETHOAC Flexible Group Condition VI.1. of Solutia's Title V Permit requires Solutia to implement a fugitive emission monitoring program as defined in Rule 628(2).

NESHAP

25. Pursuant to Section 112(b) of the CAA, 42 U.S.C. § 7412(b), EPA designates HAP that present or may present a threat of adverse effects to human health or the environment.

26. Section 112(c) of the CAA, 42 U.S.C. § 7412(c), requires EPA to publish a list of categories of sources that EPA finds present a threat of adverse effects to human health or the environment due to emissions of HAP, and to promulgate emission standards for each source category. These standards are known as "national emission standards for hazardous air pollutants" or "NESHAP." EPA codifies these requirements at 40 C.F.R. Part 63.

27. Section 112(d) of the CAA, 42 U.S.C. § 7412(d), requires EPA to establish NESHAP for both major and area sources of HAPs that are listed for regulation under CAA Section 112(c). A "major source" includes a "stationary source" that emits or has the potential to emit 10 tpy or more of any single HAP or 25 tpy or more of any combination of HAPs. An "area source" is a "stationary source" that is not a major source. Section 112(a) of the CAA, 42 U.S.C. § 7412(a).

28. A "stationary source" is any building, structure, facility, or installation that emits or may emit any air pollutant. 42 U.S.C. §§ 7412(a), 7411(a).

29. The NESHAP are national technology-based performance standards for HAP sources in each category that become effective on a specified date. The purpose of these standards is to ensure that all sources achieve the maximum degree of reduction in emissions of HAP that EPA determines is achievable for each source category.

30. Section 112(i)(3) of the CAA, 42 U.S.C. § 7412(i)(3), prohibits any person subject to a NESHAP from operating an existing source in violation of a NESHAP after its effective date. See also 40 C.F.R. § 63.4.

The NESHAP General Provisions (Subpart A)

31. The General Provisions for the NESHAP are codified at 40 C.F.R. Part 63, Subpart A.

32. The NESHAP General Provisions, 40 C.F.R. §§ 63.1-63.16, apply to affected sources regulated by a relevant NESHAP, provided that the NESHAP explicitly identifies whether each General Provision is included in the NESHAP.

33. Subpart A, at 40 C.F.R. § 63.10(b)(1), requires that the owner or operator of an affected source maintain files of all information required by 40 C.F.R. Part 63 in a form suitable and readily available for expeditious inspection and review.

34. Subpart A, 40 C.F.R. § 63.10(b)(2)(vii), requires that the owner or operator of an affected source maintain relevant records of required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of continuous monitoring system data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report).

The NESHAP for Chemical Manufacturing Area Sources (Subpart VVVVVV)

35. Pursuant to Section 112(d) of the CAA, 42 U.S.C. § 7412(d), EPA promulgated regulations for particular industrial sources that emit one or more of the HAPs listed in Section 112(b) of the CAA, 42 U.S.C. § 7412(b), in significant quantities.

36. Pursuant to Section 112(d) of the CAA, 42 U.S.C. § 7412(d), EPA promulgated Subpart VVVVVV on October 29, 2009. 74 Fed. Reg. 56008, 56041 (October 29, 2009). Subpart VVVVVV establishes emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with chemical manufacturing. The owner or operator of an existing affected source with a startup date before October 6, 2008, must comply with the provisions of this subpart no later than March 21, 2013, as required under 40 C.F.R. § 63.11494(f).

37. Subpart VVVVVV, at 40 C.F.R. § 63.11494(a), applies to a chemical manufacturing process unit (CMPU) that: (1) is located at an area source of HAP emissions; and (2) for which HAPs listed in Table 1 to Subpart VVVVVV are present, as specified in 40 C.F.R. § 63.11494(a)(2)(i)-(iv), which includes that any Table 1 HAP is produced as a product of the CMPU.

38. Table 1 of Subpart VVVVVV lists, among others, acetaldehyde.

39. Subpart VVVVVV, at 40 C.F.R. § 63.11494(b), states that a CMPU includes all process vessels, equipment, and activities necessary to operate a chemical manufacturing process that produces a material or a family of materials described by North American Industry Classification System (NAICS) code 325. A CMPU consists of one or more-unit operations and any associated recovery devices. A CMPU also includes each storage tank, transfer operation,

surge control vessel, and bottoms receiver associated with the production of such NAICS code 325 materials.

40. Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(3), states that owners or operators of CMPUs "must conduct inspections of process vessels and equipment for each CMPU in organic HAP service or metal HAP service, as specified in paragraphs (a)(3)(i) through (v) of this section, to demonstrate compliance with paragraph (a)(1) of this section and to determine that the process vessels and equipment are sound and free of leaks."

41. Subpart VVVVVV, at 40 C.F.R. § 63.11502, defines equipment as each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in or associated with a CMPU.

42. Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(3)(i), requires inspections to be conducted at least quarterly.

43. Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(3)(i)(ii), states that detection methods incorporating sight, sound, or smell are acceptable methods for performing inspections required pursuant to 40 C.F.R. § 63.11495(a)(3).

44. Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(4), states that owners or operators of CMPUs "must repair any leak within 15 calendar days after detection of the leak or document the reason for any delay of repair."

45. Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(5), states that owners or operators of CMPUs "must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair."

46. Subpart VVVVVV, at 40 C.F.R. § 63.11495(d), requires that, at all times, owners or operators of CMPUs operate and maintain any affected CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the CMPU.

47. Subpart VVVVVV, at 40 C.F.R. § 63.11496(a), requires owners or operators of CMPUs to comply with the requirements in paragraphs (a)(1) through (4) of 40 C.F.R. § 63.11496(a), for organic HAP emissions from batch process vents for each CMPU using Table 1 organic HAP, and with the emission limits and other requirements in Table 2, if uncontrolled organic HAP emissions from all batch process vents from a CMPU are equal to or greater ($\geq$) than 10,000 lbs per year (lb/yr).

48. Table 2, 1.a., of Subpart VVVVVV requires owners or operators of CMPUs to reduce collective uncontrolled total organic HAP emissions from the sum of all batch process vents by $\geq$ 85 percent (%) by weight or to lower or equal to ($\leq$) 20 ppm by volume by routing emissions from a sufficient number of the batch process vents through a closed vent system to

any combination of control devices (except a flare) in accordance with the requirements of 40 C.F.R. § 63.982(c) and the requirements referenced therein.

49. Subpart VVVVVV, at 40 C.F.R. § 63.11496(g), states that provisions in 40 C.F.R. Part 63, Subpart SS apply to the owners or operators of CMPUs, that are complying with the emission limits and other requirements for batch process vents in Table 2 of Subpart VVVVVV.

50. Subpart VVVVVV, at 40 C.F.R. § 63.11498(a), requires owners or operators of CMPUs to comply with the requirements in paragraph (a)(1) and (2) of 40 C.F.R. § 63.11498(a) and in Table 6, Item 2 to Subpart VVVVVV for all wastewater streams containing partially soluble HAP concentration $\geq$ 10,000 ppm by weight (ppmw) and containing a separate organic phase.

51. Table 6, Item 2 of Subpart VVVVVV requires owners or operators of CMPUs to comply with the requirements in Item 1 of Table 6 for the water phase, and to recycle to a process, use as fuel, or dispose as hazardous waste either onsite or offsite, the organic phase(s).

52. Table 7 of Subpart VVVVVV lists partially soluble HAPs and includes, among others, vinyl acetate and acetaldehyde.

53. Subpart VVVVVV, at 40 C.F.R. § 63.11501(c), requires owners or operators of CMPUs to maintain files of all information required by this subpart for at least 5 years following the date of each occurrence according to the requirements in 40 C.F.R. § 63.10(b)(1) and to comply with the recordkeeping and reporting requirements of 40 C.F.R. § 63.10(b)(2)(iii) and (vi) through (xiv).

The NESHAP for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process (Subpart SS)

54. On June 29, 1999, EPA promulgated Subpart SS, 64 Fed. Reg. 34866 (June 29, 1999).

55. Subpart SS, at 40 C.F.R. § 63.982(c), states that owners or operators who vent emissions through a closed vent system to a non-flare control device shall meet the requirements in 40 C.F.R. § 63.983 for closed vent systems, the applicable recordkeeping and reporting requirements of 40 C.F.R. §§ 63.998 and 63.999, and the applicable requirements listed in paragraphs (c)(1) through (3) of 40 C.F.R. § 63.982.

56. Subpart SS, at 40 C.F.R. § 63.990(c)(1), requires that where an absorber is used as a control device a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used.

57. Subpart SS, at 40 C.F.R. § 63.990(c)(2), requires that where a condenser is used as a control device a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used.

58. Subpart SS, at 40 C.F.R. § 63.998(b)(1)(i), states that where a continuous record is required by Subpart SS, owners or operator shall maintain a record of values measured at least once every 15 minutes or each measured value for systems that measure more frequently than once every 15 minutes.

Finding of Facts

59. Solutia owns and operates a resin production facility at 5100 West Jefferson Avenue, Trenton, Michigan (Facility).

60. At its Facility, Solutia processes and emits vinyl acetate, acetaldehyde, and methanol, HAP listed in Section 112(b) of the CAA, 42 U.S.C. § 7412(b), and other VOC (e.g., ethanol and ethyl acetate).

61. At the Facility, acetaldehyde, a Subpart VVVVVV Table 1 HAP is generated as a byproduct and used as a raw material at concentrations greater than 0.1%.

62. The Facility includes CMPUs as those terms are defined in Subpart VVVVVV, at 40 C.F.R. § 63.11494.

63. The Facility has the potential to emit over 100 tpy of VOC, making it a "major source," as that term is defined at Section 502(2)(B) of the CAA, 42 U.S.C. § 7661(2)(B), and 40 C.F.R. § 70.2, for purposes of Title V.

Excess Emissions from Polykettles and Hydrolysis Reactor #3

64. In its ROP malfunction report dated August 5, 2013 (Solutia's January 2018 Response, Response Number 6), Solutia reported that the operation of Polykettle #1 on July 26, 2013 resulted in excess emissions of 465 lbs of vinyl acetate and 0.46 lbs of acetaldehyde.

65. In its ROP malfunction report dated September 11, 2014 (Solutia's January 2018 Response, Response Number 6), Solutia reported that the operation of Polykettle #1 on September 1, 2014 resulted in excess emissions of 2,405 lbs of vinyl acetate and 25 lbs of acetaldehyde.

66. In its ROP malfunction report dated November 26, 2014 (Solutia's January 2018 Response, Response Number 6), Solutia reported that the operation of Polykettle #3 on November 20, 2014 resulted in excess emissions of 16 lbs of vinyl acetate and 4 lbs of ethanol.

67. In its ROP malfunction report dated March 2, 2015 (Solutia's January 2018 Response, Response Number 6), Solutia reported that the operation of Polykettle #2 on February 20, 2015 resulted in excess emissions of 1,924 lbs of vinyl acetate and 75 lbs of acetaldehyde.

68. In its ROP malfunction report dated July 20, 2015 (Solutia's January 2018 Response, Response Number 6), Solutia reported that the operation of Hydrolysis Reactor #3 on June 18, 2015 resulted in excess emissions of 212 lbs of ethyl acetate, 141 lbs of ethanol, 0.8 lbs of vinyl acetate and 0.05 lbs of acetaldehyde.

69. In its semi-annual Subpart VVVVVV report for the Facility dated July 30, 2015, and covering the reporting period for the first half of 2015, Solutia reported the following:

- On February 23, 2015, for approximately 31 minutes, collective uncontrolled HAP emissions from the sum of all batch process vents were not reduced by 85% for Polykettle #3, resulting in a release of approximately 5,600 lbs of uncontrolled HAP emissions;
- On April 20, 2015, for approximately 10 minutes, collective uncontrolled HAP emissions from the sum of all batch process vents were not reduced by 85% for Polykettle #2, resulting in a release of approximately 1,400 lbs of uncontrolled HAP emissions;
- On June 23, 2015, for approximately 50 minutes, collective uncontrolled HAP emissions from the sum of all batch process vents were not reduced by 85% for Polykettle #3, resulting in a release of approximately 11 lbs of uncontrolled HAP emissions; and
- On June 28, 2015, for approximately 23 minutes, collective uncontrolled HAP emissions from the sum of all batch process vents were not reduced by 85% for Polykettle #1, resulting in a release of approximately 200 lbs of uncontrolled HAP emissions.

70. In its semi-annual Subpart VVVVVV report for the Facility dated February 1, 2016, and covering the reporting period for the second half of 2015, Solutia reported that on August 18, 2015, for approximately 8 hours, the collective uncontrolled HAP emissions from the sum of all batch process vents were not reduced by 85% for Polykettle #1, resulting in the release of approximately 400 lbs of uncontrolled HAP emissions.

71. In its 2015 Toxic Release Inventory report for the Facility (compiled from government data last released on October 17, 2017; search dated August 2, 2018), Solutia reported on September 21, 2015 excess emissions of 200 lbs of vinyl acetate.

72. In its semi-annual Subpart VVVVVV report for the Facility dated August 1, 2016, and covering the reporting period for the first half of 2016, Solutia reported the following:

- There were excess emissions due to startup/shutdowns for approximately 1.3 hours; and
- There were excess emissions due to a scrubber downtime during high pressure conditions in the polykettles for approximately 1.2 hours.

73. In its semi-annual Subpart VVVVVV report for the Facility dated January 26, 2017, and covering the reporting period for the second half of 2016, Solutia reported the following:

- There were excess emissions due to a scrubber downtime during high pressure conditions in the polykettles for approximately 3.6 hours; and
- There were excess emissions due to startup/shutdowns for approximately 0.3 hours.

74. In its semi-annual Subpart VVVVVV report for the Facility dated July 25, 2017, and covering the reporting period for the first half of 2017, Solutia reported excess emissions due to a scrubber downtime during high pressure conditions in the polykettles for approximately 1.2 hours.

75. In its revised semi-annual Subpart VVVVVV report for the Facility dated February 16, 2018, and covering the reporting period for the second half of 2017, Solutia reported that there were excess emissions due to a scrubber downtime during high pressure conditions in the polykettles for approximately 6 hours.

76. In the MDEQ Pollution Emergency Alerting System report for the Facility dated January 2, 2018, Solutia reported excess emissions of 2,500 lbs of vinyl acetate on January 2, 2018.

77. In response to MDEQ's request for information, on July 17, 2017, Solutia provided MDEQ via email the Facility's HAP emissions summary over 24-month period, from June 2015 through May 2017, as calculated on a 12-month rolling basis. The monthly emissions data combined with the aforementioned releases for vinyl acetate result in Solutia having exceeded 9.0 tpy, as calculated on a 12-month rolling basis, of vinyl acetate from June 2015 through January 2016.

78. According to third party and in-house inspection reports of polykettles (Solutia's January 2018 Response, Response Number 7), dated August 9, 2013, and October 14-15, 2015, there were numerous active and repaired leaks in the water jackets of polykettles revealed during inspections. These reports recommended that Solutia repair and/or replace water jackets.

79. On August 30, 2017, EPA conducted an inspection at the Facility. During the inspection, EPA observed numerous active and repaired leaks in the water jacket of each polykettle.

80. According to Solutia's January 2018 Response, Response Number 14, the Facility's MAP was submitted to MDEQ on April 17, 2008. The MAP was amended on May 28, 2009, June 16, 2017, and February 12, 2018, respectively. Solutia did not amend the MAP in 2015 and 2016, following several excess emissions events that occurred between 2014 and 2016.

Continuous Monitoring Systems

81. In a letter dated April 3, 2013, EPA approved an alternative monitoring plan requiring that Solutia continuously monitor scrubber liquid flow rate, as an alternative to scrubbing liquid flow rate and specific gravity, as required by 40 C.F.R. § 63.990(c)(1).

82. In its semi-annual Subpart VVVVVV report for the Facility dated August 1, 2016, and covering the reporting period for the first half of 2016, Solutia reported a condensers' exit temperature continuous monitoring system and scrubbers' liquid flow rate continuous monitoring system downtime for a duration of 42 hours.

Wastewater

83. In its revised semi-annual Subpart VVVVVV report for the Facility dated February 16, 2018, and covering the reporting period for the second half of 2017, Solutia reported that approximately 60 gallons of the Facility's wastewater stream containing an organic phase was discharged to the onsite wastewater treatment system instead of recycling to the process on September 6, 2017.

LDAR

84. In its semi-annual Subpart VVVVVV report for the Facility dated January 29, 2015, and covering the reporting period for the second half of 2014, Solutia reported that quarterly inspections (3Q2014) for equipment leaks were not carried out for 114 components.

85. In its semi-annual Subpart VVVVVV report for the Facility dated August 1, 2016, and covering the reporting period for the first half of 2016, Solutia reported that there were 10 open-ended lines, discovered on April 7, 2016 and April 12, 2016 (1H2016).

86. In its semi-annual Subpart VVVVVV report for the Facility dated January 26, 2017, and covering the reporting period for the second half of 2016, Solutia reported that the audio, visual, olfactory inspections were not performed on 1,142 LDAR components at the Facility during the third quarter 2016 (3Q2016).

87. On December 16, 2017, Solutia provided EPA with the LDAR monitoring data from October 2014 to October 2016 (LDAR Database).

88. The LDAR Database shows that Solutia did not make timely repairs on components as detailed in the table below. Solutia also did not place these components on delay of repair.

Component ID	**Component Type**	**Date Found Leaking**	**Date Repairs**	**Total Days from Identification to Repair**
2058	Pump	December 9, 2014	January 5, 2015	27
1665	Pump	October 7, 2015	October 28, 2015	21
1739	Connector	October 24, 2015	November 16, 2015	23

89. On January 16, 2018, EPA issued an information request to Solutia pursuant to Section 114(a) of the CAA, 42 U.S.C. § 7414(a) (the January 2018 114 Request).

90. On February 19, and March 2 and 9, 2018, Solutia submitted information to EPA, responding to the January 2018 114 Request (January 2018 Response). EPA found

inconsistencies between information provided by Solutia regarding its LDAR programs in the 2018 Response, LDAR Database, and semi-annual Subpart VVVVVV reports. On June 6, 2018, EPA requested additional information via email to supplement the January 2018 Response and to clarify inconsistencies.

91. On July 13, 2018, Solutia submitted additional information to EPA responding to EPA's June 6, 2018 request (July 2018 Response).

92. According to Solutia's July 2018 Response, Response Number 6, twenty valves in HAP service were not monitored because they were not included in the LDAR program. These valves were added to the LDAR Database 4th Quarter 2015.

93. According to Solutia's July 2018 Response, Response Number 6, 7, and 9, several connectors in HAP service were not monitored because they were not included in the LDAR program. The table below summarizes the number of connectors and the quarter they were added to the LDAR Database:

Number of Connectors	**Added to LDAR Database**
71	4th Quarter 2015
1	2nd Quarter 2016
1	3rd Quarter 2016

94. According to Solutia's July 2018 Response, Response Number 6, one open-ended line in HAP service was not monitored because it was not included in the LDAR program. This open-ended line was added to the LDAR Database 4th Quarter 2015.

95. According to Solutia's July 2018 Response, Response 6 and 8, several valves in VOC service were not monitored because they were missing from the LDAR program. The table below summarizes the number of valves and the quarter they were added to the LDAR Database:

Number of Valves	**Added to LDAR Database**
12	4th Quarter 2015
14	3rd Quarter 2016

Alleged Violations

Excess Emissions from Polykettles and Hydrolysis Reactor #3

96. Solutia failed to control collective HAP emissions from the sum of all batch process vents by 85%, as described in paragraphs 64 through 76, in violation of Subpart VVVVVV at 40 C.F.R. § 63.11496(a) and Table 2, 1.a.

97. Solutia failed to limit daily emissions of VOC from the Facility to less than 221 lbs on July 26, 2013, September 1, 2014, February 20, 2015, February 23, 2015, April 20, 2015, June 18, 2015, August 18, 2015, and January 2, 2018, as described in paragraphs 64, 65, 67 through 70, and 76 in violation of FGRULE631COMB Flexible Group Condition I.1., of Solutia's Title V Permit.

98. From July 2015 through January 2016, Solutia failed to limit emissions of vinyl acetate from the Facility to less than 9.0 tpy, as calculated on a 12-month rolling basis, as described in paragraph 77, in violation of Condition I.1 of the Source-Wide Conditions of Solutia's Title V Permit.

99. Solutia failed to operate and maintain the polykettles in a manner consistent with safety and good air pollution control practices for minimizing emissions, as described in paragraphs 64 through 76, in violation of Subpart VVVVVV, at 40 C.F.R. § 63.11495(d).

100. Solutia failed to amend the MAP within 45 days after a malfunction event occurred, as described in paragraphs 64 through 75, and 80, in violation of FGPOLYKETTLES Flexible Group Condition III.1 of Solutia's Title V Permit.

Continuous Monitoring Systems

101. Solutia failed to maintain continuous records of the condensers' exit temperature, as described in paragraph 82, in violation of Subpart A at 40 C.F.R. § 63.10(b)(2)(vii), and Subpart SS, at 40 C.F.R. §§ 63.990(c)(2) and 63.998(b)(1)(i).

102. Solutia failed to maintain continuous records of the scrubbers' liquid flow rate, as described in paragraph 82, in violation of FGPOLYKETTLES Flexible Group Condition VI.2 of Solutia's Title V Permit and in violation of the 40 C.F.R. § 63.990(c)(1) alternative approved by EPA via letter dated April 3, 2013.

Wastewater

103. Solutia failed to recycle the separated organic layer(s) of its wastewater stream containing partially soluble HAP at concentration ≥10,000 ppmw to a process, as described in paragraph 83, in violation of Subpart VVVVVV at 40 C.F.R. § 63.11498(a).

LDAR

104. Solutia failed to conduct quarterly monitoring for leaks for 114 LDAR components in 3Q2014, 10 open-ended lines in 1H2016 not included in the LDAR Database, and

1,142 LDAR components in 3Q2016, as described in paragraphs 84 through 86, in violation of Subpart VVVVVV at 40 C.F.R. § 63.11495(a)(3) and Condition VI.3. of the Source-Wide Conditions of Solutia's Title V Permit.

105. Solutia failed to repair three LDAR components at the Facility within 15 calendar days of discovering evidence of a leak, as described in paragraph 88, in violation of the Michigan SIP at Rule 628.(9); FGRESETHOAC Flexible Group Condition VI.1 of Solutia's Title V Permit (for components in VOC service); and Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(4) for components in HAP service.

106. Solutia failed to monitor several valves, connectors, and one open-ended line because the components were not included in the LDAR program, as described in paragraphs 92 through 95, in violation of the Michigan SIP Rule 628.(2); FGRESETHOAC Flexible Group Condition VI.1 of Solutia's Title V Permit (for components in VOC service); and Solutia's Title V Permit Special Condition VI.3 of the Source-Wide Conditions for components in HAP service; and Subpart VVVVVV, at 40 C.F.R. § 63.11495(a)(3).

107. Solutia failed to maintain information regarding its LDAR programs in a form suitable and readily available for expeditious inspection and review, as described in paragraph 90, in violation of Subpart VVVVVV, at 40 C.F.R. § 63.11501(c); Subpart A, at 40 C.F.R. § 63.10(b)(1); Condition VI.4. of the Source-Wide Conditions of Solutia's Title V Permit (for the components in HAP service); and FGRESETHOAC Flexible Group Condition VI.1 of Solutia's Title V Permit (for components in VOC service).

Environmental Impact of Violations

108. Solutia's violations have caused excess emissions of VOC and HAP.

109. VOC are precursors in the formation of atmospheric and ground-level ozone, a photochemical oxidant associated with a number of detrimental health effects, environmental, and ecological effects. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

110. HAP emissions may include pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects and/or adverse environmental effects.

12/19/18
Date

Edward Nam
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I certify that I sent a Notice of Violation and Finding of Violation, No. EPA-5-19-MI-01, by Certified Mail, Return Receipt Requested, to:

Gary Williams
Plant Manager
Solutia, Inc.
5100 West Jefferson Avenue
Trenton, Michigan 48183

I also certify that I sent copies of the Notice of Violation and Finding of Violation by e-mail to:

Jenine Camilleri, Enforcement Unit Supervisor, Air Quality Division
CamilleriJ@michigan.gov

Wilhemina McLemore, Environmental Manager, Detroit District
mclemorew@michigan.gov

Brett A. Sago, Director, HSE Legal Service, Eastman Chemical
bsago@eastman.com

Steven C. Kohl, Warner Norcross&Judd LLP
SKohl@wnj.com

On the 20th day of December 2018

Kathy Jones
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7017 0660 0000 3661 8366